



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,819	10/31/2001	Richard Paul Tarquini	10017333-1	4711

7590 04/03/2006
HEW LETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

HOFFMAN, BRANDON S

ART UNIT PAPER NUMBER

2136

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,819

Applicant(s)

TARQUINI ET AL.

Examiner

Brandon S. Hoffman

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claim 1-15 are pending in this office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2006, has been entered.

Claim Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Vaidya (U.S. Patent No. 6,279,113).

Regarding claim 1, Vaidya teaches a node of a network maintaining an instance of an intrusion prevention system, comprising:

- A memory module for storing data in a machine-readable format for retrieval and execution by a central processing unit (fig. 2, ref. num 39); and
- An operating system comprising
 - A network stack comprising a protocol driver, a media access control driver and an instance of the intrusion prevention system implemented as an intermediate driver and bound to the protocol driver and the media access control driver (col. 7, lines 18-24),
- The intrusion prevention system comprising an associative process engine and an input/output control layer (fig. 2, ref. num 10),
 - The input/output control layer operable to receive at least one of a plurality of machine-readable network-exploit signatures from a database and provide the at least one machine-readable network-exploit signature to the associated process engine (fig. 3, ref. num 58),
 - The associated process engine operable to compare a packet with the at least one machine-readable network-exploit signature and determine a correspondence between the packet and the at least one machine-readable network-exploit signature (fig. 3, ref. num 64).

Regarding claim 2, Vaidya teaches wherein the database is maintained in a storage device of the node (fig. 2, ref. num 26).

Regarding claim 3, Vaidya teaches wherein each of the plurality of machine-readable network-exploit signatures comprise a respective directive that defines instructions to be executed upon determination of a correspondence between the packet and the respective exploit signature (col. 6, lines 1-11).

Regarding claims 4 and 5, Vaidya teaches wherein, upon determination of a correspondence between the packet and two or more of the plurality of machine-readable network-exploit signatures, [each of the directives/an alternative directive] of the two or more machine-readable network-exploit signatures are executed by the intrusion prevention system (col. 7, lines 41-45 and lines 62-67).

Regarding claim 6, Vaidya teaches a method of analyzing a packet at a node of a network by an intrusion prevention system executed by the node (fig. 3), comprising:

- Reading the packet by the intrusion prevention system (fig. 3, ref. num 58);
- Comparing the packet with a plurality of machine-readable network-exploit signatures (fig. 3, ref. num 64); and
- Determining a correspondence between the packet and at least two of the plurality of machine-readable network-exploit signatures (fig. 3, ref. num 64 and col. 7, lines 12-24).

Regarding claim 7, Vaidya teaches further comprising generating a record of the at least two of the plurality of machine-readable network-exploit signatures with which a correspondence with the packet is made (col. 7, lines 32-34).

Regarding claim 8, Vaidya teaches further comprising transmitting the record to a management node connected to the network (col. 6, lines 21-24).

Regarding claim 9, Vaidya teaches further comprising logging the record in a database (col. 5, lines 47-51).

Regarding claims 10-12, Vaidya teaches further comprising executing, by the intrusion protection system, a [respective/at least one/an alternative] directive of each of the at least two machine-readable signatures determined to correspond with the packet (col. 7, lines 41-45).

Regarding claim 13, Vaidya teaches a computer-readable medium having stored thereon a set of instructions to be executed, the set of instructions, when executed by a processor, cause the processor to perform a computer method of:

- Comparing a packet with a plurality of machine-readable network-exploit signatures (fig. 3, ref. num 64);

- Determining a correspondence between the packet and at least **two** of the plurality of machine-readable network-exploit signatures (fig. 3, ref. num 64 and col. 7, lines 12-24); and
- Generating a record of the **at least two signatures** with which the correspondence is made (col. 7, lines 32-35).

Regarding claim 14, Vaidya teaches further comprising a set of instructions that cause, when executed by the processor, the processor to perform a computer method of:

- Determining a correspondence between the packet and a subset of the plurality of machine-readable network-exploit signatures, each machine-readable network-exploit signature comprising a directive (fig. 3, ref. num 64 and col. 7, lines 12-24 and col. 7, lines 51-62); and
- Executing, by the processor, each directive of the record of machine-readable signatures (col. 7, lines 62-67).

Regarding claim 15, Vaidya teaches further comprising a set of instructions that cause, when executed by the processor, the processor to perform a computer method of executing a directive dependent on the **corresponding** machine-readable network-exploit signatures (col. 7, lines 41-45).

Response to Arguments

5. Applicant argues:

- a. Independent claim 1 is not taught by the references to include a network stack that includes an instance of the intrusion prevention system implemented as an intermediate driver (page 5, last paragraph through page 6).
- b. Independent claims 6 and 13 are not taught by the references to include determining a correspondence between a packet and at least two of the plurality of machine-readable network-exploit signatures (page 7 through page 9).

Regarding argument (a), examiner disagrees with applicant. Column 7, lines 18-24 of Vaidya teach a data packet that includes an IP header, MAC header information. The passage continues by saying that extracting the above data helps detect network intrusions. The IP header is a protocol; the MAC header information is the media access control; the extraction of both enable the detection of network intrusions, which constitutes the instance of the IPS as an intermediate.

Regarding argument (b), examiner disagrees with applicant. Claim 13 added this limitation in the amendment, and is therefore moot. As for claim 6, column 7, lines 12-24 (more specifically line 17), that signature profiles are extracted. Profiles mean two or more, which reads on the claimed limitation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brandon Hoffman

BH

CHRISTOPHER REVAK
PRIMARY EXAMINER

CR 3/29/06